

August 31, 2023

SkyDance Vascular, Inc.
Scott Pease
Sr. VP, Regulatory Affairs and Quality Assurance
3058 Millcreek Road
Pleasant Grove, Utah 84062

Re: K231626

Trade/Device Name: OSPREY Closed IV Catheter System (OspreyV2)

Regulation Number: 21 CFR 880.5200 Regulation Name: Intravascular Catheter

Regulatory Class: Class II

Product Code: FOZ Dated: May 31, 2023 Received: June 2, 2023

Dear Scott Pease:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. Although this letter refers to your product as a device, please be aware that some cleared products may instead be combination products. The 510(k) Premarket Notification Database located at https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm identifies combination product submissions. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the <u>Federal Register</u>.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part

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801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803) for devices or postmarketing safety reporting (21 CFR 4, Subpart B) for combination products (see https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820) for devices or current good manufacturing practices (21 CFR 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to https://www.fda.gov/medical-device-problems.

For comprehensive regulatory information about medical devices and radiation-emitting products, including information about labeling regulations, please see Device Advice (https://www.fda.gov/training-and-continuing-education/cdrh-learn). Additionally, you may contact the Division of Industry and Consumer Education (DICE) to ask a question about a specific regulatory topic. See the DICE website (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice) for more information or contact DICE by email (DICE@fda.hhs.gov) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,

Porsche Bennett

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For David Wolloscheck, Ph.D.

Assistant Director

DHT3C: Division of Drug Delivery and

General Hospital Devices,

and Human Factors

OHT3: Office of GastroRenal, ObGyn,

General Hospital and Urology Devices

Office of Product Evaluation and Quality

Center for Devices and Radiological Health

Enclosure

DEPARTMENT OF HEALTH AND HUMAN SERVICES Food and Drug Administration

Indications for Use

510(k) Number (if known)

K231626

Form Approved: OMB No. 0910-0120
Expiration Date: 06/30/2023

Expiration Date: 06/30/2023 See PRA Statement below.

Device Name OSPREY Closed IV Catheter System (OspreyV2)
Indications for Use (Describe) OSPREY Closed IV Catheter System (OspreyV2) is an intravascular catheter intended to be inserted into the patient's vascular system for short-term use to sample blood, monitor blood pressure, or administer fluids intravenously. Blood is contained within the device during the catheter insertion process aiding in the prevention of blood exposure. This catheter may be used for any patient population with consideration given to adequacy of vascular anatomy and appropriateness of procedure. The OSPREY Closed IV Catheter System (OspreyV2) is suitable for use with power injectors rated for a maximum of 325 psi when connected to male luer lock.
Type of Use (Select one or both, as applicable)
Prescription Use (Part 21 CFR 801 Subpart D) Over-The-Counter Use (21 CFR 801 Subpart C)
CONTINUE ON A SEPARATE PAGE IF NEEDED.

This section applies only to requirements of the Paperwork Reduction Act of 1995.

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K231626 - 510(k) SUMMARY

Submitter

SkyDance Vascular, Inc. 3058 Millcreek Road Pleasant Grove, UT 84062

Contact Phone: (m) 678-689-8010

Contact Person: Scott Pease, Sr. VP, Regulatory Affairs & Quality Assurance

(scott.pease@skydancevascular.com)

Date Prepared: August 31, 2023

Name of Device: OSPREY Closed IV Catheter System (OspreyV2)

Common or Usual Name: Intravascular Catheter

Classification Name: Intravascular Catheter

Regulatory Class II

Product Code / Regulation: FOZ / 21 CFR § 880.5200

Predicate Device(s): Primary Predicate (A) – K223018 (OSPREY PERIPHERAL IV

Catheter System) - SkyDance Vascular, Inc.

Class II, Intravascular Catheter, FOZ / 21 CFR § 880.5200

Secondary Predicate (B) – K102520 (Nexiva Closed IV Catheter

System) - Becton Dickinson Vascular Access Inc.

Class II, Intravascular Catheter, FOZ/21 CFR § 880.5200

Indications for Use

OSPREY Closed IV Catheter System (OspreyV2) is an intravascular catheter intended to be inserted into the patient's vascular system for short-term use to sample blood, monitor blood pressure, or administer fluids intravenously. Blood is contained within the device during the catheter insertion process aiding in the prevention of blood exposure. This catheter may be used for any patient population with consideration given to adequacy of vascular anatomy and appropriateness of procedure.

The OSPREY Closed IV Catheter System (OspreyV2) is suitable for use with power injectors rated for a maximum of 325 psi when connected to male luer lock.

Device Description

The OPREY Closed IV Catheter System (OspreyV2) is a single use, sterile intravascular catheter designed to be inserted into a patient's vascular system to sample blood, monitor blood pressure, or administer fluids intravenously for short-term (<30 days) use. The device is constructed with a clear housing having integrated wings and ribs to assist with its handling, a beveled needle that allows the catheter to be deployed through it and the needle fully and permanently passively retracts into the housing when the catheter hub with its integrated extension tube, including an incorporated pinch clamp, female luer with porous (vent) plug is fully advanced. The device is placed in a thermal formed tray that goes into a Tyvek pouch providing the sterile barrier.

Principles of Operation

The OSPREY Closed IV Catheter System (OspreyV2) design deploys the catheter by passing it through its integrated access needle. Once the access needle achieves the desired venipuncture the user can quickly visualize blood through the housing's integrated flash window and immediately begin advancing the catheter through the access needle via the pink catheter hub having an integrated extension tube, including an incorporated pinch clamp, female luer with porous (vent) plug. Upon fully advancing the catheter hub within the proximal end of the device housing it simultaneously activates the passive needle retraction of the access needle within the device housing. Since the catheter is deployed through the access needle, the OspreyV2 catheter tip design is optimized to facilitate off-axis delivery of infusate. Additionally, the OspreyV2 is suitable for use with power injectors when connected to male luer lock.

Technological Characteristic Comparison to Predicate

The OSPREY Closed IV Catheter System (OpsreyV2) is similar to the predicate devices, OSPREY PERIPHERAL IV Catheter System and Nexiva Closed IV Catheter System. Each of the devices have the following characteristics in common: 1) they are short term catheters, 2) they are radiopaque catheters, 3) they are peripheral catheters, 4) they are disposable, single use catheters, 5) they provide a shielding mechanism for the used needle. Additionally, the OSPREY Closed IV Catheter System (OpsreyV2) incorporates an integrated extension tube, including a pinch clamp, and female luer with porous (vent) plug, as well as the ability to use with a power injector, consistent with the Nexiva Closed IV Catheter System.

Table I: Comparison Table of Subject Device to Both the Primary Predicate (A) and Secondary Predicate (B) Devices

Attribute	Subject – OSPREY Closed IV Catheter System (OspreyV2)	Primary Predicate (A) – OSPREY PERIPHERAL IV Catheter System (K223018)	Secondary Predicate (B) – BD Nexiva Closed IV Catheter System (K102520)	Substantial Equivalence
Classification	21 CFR §880.5200 Class II FOZ - Intravascular Catheter	21 CFR §880.5200 Class II FOZ - Intravascular Catheter	21 CFR §880.5200 Class II FOZ - Intravascular Catheter	Identical
Indications for Use	OSPREY Closed IV Catheter System (OspreyV2) is an intravascular catheter intended to be inserted into the patient's vascular system for short-term use to sample blood, monitor blood pressure, or administer fluids intravenously. Blood is contained within the device during the catheter insertion process aiding in the prevention of blood exposure. This catheter may be used for any patient population with consideration given to adequacy of vascular anatomy and appropriateness of procedure. The OSPREY Closed IV Catheter System (OspreyV2) is suitable for use with power injectors rated for a maximum of 325 psi when connected to male luer lock.	An intravascular catheter is intended to be inserted into the patient's vascular system for short term use to sample blood, monitor blood pressure, or administer fluids intravenously.	use (less than 30 days) to sample	Primary Predicate: Subject device IFU is expanded to include its suitability for use with power injectors and any patient population based on vascular anatomy and appropriateness of procedure.
Critical Procedural Steps	Remove the device from the packaging and inspect before use.	Remove the device from the packaging and inspect before use.	Remove the device from the packaging and inspect before use.	Identical

Attribute	Subject – OSPREY Closed IV Catheter System (OspreyV2)	Primary Predicate (A) – OSPREY PERIPHERAL IV Catheter System (K223018)	Secondary Predicate (B) – BD Nexiva Closed IV Catheter System (K102520)	Substantial Equivalence
	Insert needle into the target vein and observe blood flashback response.	Insert needle into the target vein and observe blood flashback response.	Insert needle into the target vein and observe blood flashback response.	
	Advance catheter into the vein while maintaining needle position.	Advance catheter into the vein while maintaining needle position.	Advance catheter into the vein while maintaining needle position.	
	Activate the spring-loaded needle retraction feature.	Activate the spring-loaded needle retraction feature.	Withdrawal of needle activates needle tip safety feature.	
	Stabilize the catheter, apply the dressing, remove the porous flow plug and connect the IV set using the luer adapter.	Stabilize the catheter, apply the dressing and connect the IV set using the luer adapter.	Stabilize the catheter, apply the dressing, remove the porous flow plug and connect the IV set using the luer adapter.	
	Barrel (Housing): Polycarbonate	Barrel (Housing): Polycarbonate	Barrel (Housing): N/A	Similar
	Grip: Polycarbonate	Grip: Polycarbonate	Grip: Polycarbonate	Primary Predicate: Excluding
	Needle Hub: Polycarbonate	Needle Hub: Polycarbonate	Needle Hub: Polycarbonate	componentry associated with
Materials of Construction	Needle: Stainless Steel	Needle: Stainless Steel	Needle: Stainless Steel	integrated extension tubing, the materials
	Needle Tip Shield: N/A	Needle Tip Shield: N/A	Needle Tip Shield: Polycarbonate	of construction of the Subject device are the same. The
	Spring: Stainless Steel	Spring: Stainless Steel	Spring: N/A	additional components of the
	Catheter Tubing: Polyurethane w/ radiopaque barium sulfate	Catheter Tubing: Polyurethane w/ radiopaque barium sulfate	Catheter Tubing: Polyurethane w/ radiopaque barium sulfate	subject device were tested for biocompatibility in
	Adhesive: Loctite	Adhesive: Loctite	Adhesive: Unknown	accordance with ISO10993-1.
	Catheter Hub: Polycarbonate	Catheter Hub: Polycarbonate	Catheter Adapter: Copolyester	Therefore, the addition of the componentry

Attribute	Subject – OSPREY Closed IV Catheter System (OspreyV2)	Primary Predicate (A) – OSPREY PERIPHERAL IV Catheter System (K223018)	Secondary Predicate (B) – BD Nexiva Closed IV Catheter System (K102520)	Substantial Equivalence
	Catheter Wing Adapter: N/A	Catheter Wing Adapter: N/A	Catheter Wing Adapter: TPE (Thermoplastic Elastomer)	associated with the integrated extension tubing does not raise
	Pinch Clamp: Polypropylene	Pinch Clamp: N/A	Pinch Clamp: Acetal	new or different questions of safety
	Extension Tubing: Tygon®	Extension Tubing: N/A	Extension Tubing: Polyurethane	and effectiveness.
	Luer Adapter: Polycarbonate	Luer Adapter: Polycarbonate	Luer Adapter: Copolyester	Secondary Predicate: The
	Porous Flow Plug: Porous Polyethylene w/ Carboxymethyl Cellulose (CMC)	Porous Flow Plug: N/A	Porous Flow Plug: Porous Polyethylene w/ Carboxymethyl Cellulose (CMC)	subject device was tested for biocompatibility in accordance with
	Lubricants: N/A	Lubricants: N/A	Lubricants: Unknown	ISO10993-1. Therefore, the
	Safety Activation Button: N/A	Safety Activation Button: N/A	Safety Activation Button: N/A	differences in component materials do not raise new or different questions of safety and effectiveness.
	Catheter-Needle Interface: Catheter through the needle	Catheter-Needle Interface: Catheter through the needle	Catheter-Needle Interface: Catheter over the needle	Similar Comment #2
	Needle Tip: Beveled	Needle Tip: Beveled	Needle Tip: Beveled	
	Catheter Tip: Rounded Tip	Catheter Tip: Rounded Tip	Catheter Tip: Tapered Tip	_
	Needle Retraction:	Needle Retraction:	Needle Retraction: N/A	
Design	Spring loaded retraction	Spring loaded retraction		
Characteristics	IV Set Connection:	IV Set Connection:	IV Set Connection:	
	Female Locking Luer Hub	Female Locking Luer Hub	Female Locking Luer Hub (Single Port Configuration)	
	Visualization: Flashback	Visualization: Flashback	Visualization: Flashback	
	Catheter OD: 0.041 – 0.043 in. Catheter ID: 0.025 – 0.031 in. Catheter Length: 1.37 in.	Catheter OD: 0.041 – 0.043 in. Catheter ID: 0.025 – 0.031 in. Catheter Length: 1.67 in.	Catheter OD: 0.042 – 0.045 in. Catheter ID: 0.031 – 0.034 in. Catheter Length: 1.25 in.	

Attribute	Subject – OSPREY Closed IV Catheter System (OspreyV2)	Primary Predicate (A) – OSPREY PERIPHERAL IV Catheter System (K223018)	Secondary Predicate (B) – BD Nexiva Closed IV Catheter System (K102520)	Substantial Equivalence
	Integrated Extension Tube: Incorporates an integrated extension tube, including a pinch clamp and female luer with porous (vent) plug.	Integrated Extension Tube: N/A	Integrated Extension Tube: Incorporates an integrated extension tube, including a pinch clamp and female luer with porous (vent) plug.	
	Power Injector: The OSPREY Closed IV Catheter System (OspreyV2) is suitable for use with power injectors rated for a maximum of 325 psi when connected to male luer lock.		Power Injector: The 18-22 gauge Nexiva TM catheters are suitable for use with power injectors rated for a maximum of 300 psi when the luer access port(s) is removed and a direct connection is made.	
	Yes	Flashback Chamber / Technology: Yes Sharps Prevention Feature: Yes Radiopaque: Yes	Flashback Chamber / Technology: Yes Sharps Prevention Feature: Yes Radiopaque: Yes	Identical
Performance		Flow Rate: 30 mL/min	Flow Rate: 58 mL/min	Both the subject device and the Primary Predicate device have the same flow rate to deliver fluids to the vessel. Performance testing of the subject device demonstrates the difference in flow rate between the

Attribute	Subject – OSPREY Closed IV Catheter System (OspreyV2)	Primary Predicate (A) – OSPREY PERIPHERAL IV Catheter System (K223018)	Secondary Predicate (B) – BD Nexiva Closed IV Catheter System (K102520)	Substantial Equivalence
				subject and secondary predicate devices do not raise new or different questions of safety and effectiveness.
Biocompatibility	Tested per ISO 10993-1: PASS	Tested per ISO 10993-1: PASS	Tested per ISO 10993-1: PASS	Identical
Sterilization	EtO Sterilized	EtO Sterilized	EtO Sterilized	Identical
Packaging	Sterile Barrier: Individual Tyvek and PET Pouches	Sterile Barrier: Individual Tyvek and PET Pouches	Sterile Barrier: Thermal Formed Tray w/ Tyvek Lid	Identical
Shelf Life	6 - Months	6 - Months	Unknown	Similar Primary Predicate, has the same shelf life. Secondary Predicate: The subject device performance was tested over the proposed self-life and therefore the potential difference does not raise new or different questions of safety and effectiveness.

Discussion of Differences in Technological Characteristics

Comment #1: The IFU of the Subject device is similar to that of the Primary Predicate, as the OSPREY Closed IV Catheter System (OspreyV2) is also an intravascular catheter intended to be inserted into the patient's vascular system for short-term use to sample blood, monitor blood pressure, or administer fluids intravenously. It is different based on its ability to be used with power injectors and the inclusion of an integrated extension tube. The subject device performance testing demonstrates that the difference in intended use does not raise new or different questions of safety and effectiveness.

The subject device is similar in comparison to the Secondary Predicate as the IFU includes a needle-shielding feature which aids in the prevention of needle-stick injuries. Blood is contained within the devices during the catheter insertion process aiding in the prevention of blood exposure. The catheters may be used for any patient population with consideration given to adequacy of vascular anatomy and appropriateness of procedure. Additionally, both the Subject and Secondary Predicate devices are suitable for use with power injectors. When considering the devices use (Subject and both the Primary & Secondary Predicate), the appropriateness of the patient's vascular anatomy must be taken into consideration. The Subjects devices IFU do not raise new or different questions of safety and effectiveness.

Comment #2: The subject and primary predicate devices are similar with the differences being the catheter length and integrated extension tubing. The subject device performance and biocompatibility testing demonstrates that the differences between the subject and primary predicate device do not raise new or different questions of safety and effectiveness. All other components are the same.

The subject device performance was tested in accordance with the bench testing listed below, particularly ISO 23908: 2011, ISO 10555-1: 2013, ISO 10555-5:2013, and ISO 8536-4:2019. Therefore, the difference in the needle retraction feature, the maximum power injection rate, and catheter dimensions do not raise new or different questions of safety and effectiveness.

Summary of Performance Data:

Bench tests were conducted to verify that the subject device met all design specifications and to support substantial equivalence to the predicate devices. Bench testing was performed on the subject device (OSPREY Closed IV Catheter System (OspreyV2)) in accordance with the standards below.

Performance

- ISO 10555-1: 2013 + A1:2017 Sterile, single-use intravascular catheters Part 1: General requirements
- ISO 10555-5 :2013 Intravascular catheters Sterile and single-use catheters Part 5: Over-needle Peripheral catheters
- ISO 80369-7:2021; Small-bore connectors for liquids and gases in healthcare applications – Part 7: Connectors with 6% (Luer) taper for intravascular or hypodermic applications.
- ISO 80369-20:2015; Small-bore connectors for liquids and gases in healthcare applications – Part 20: Common test methods.
- ISO 8536-8:2015; Infusion equipment for medical use Part 8: Infusion sets for single use with pressure infusion apparatus.
- ISO 7864:2016; Sterile hypodermic needles for single use Requirements and test methods.
- ISO 9626:2016; Stainless steel needle tubing for the manufacture of medical devices.
- ISO 8536-4:2019; Infusion equipment for medical use Part 4: Infusion sets for single use, gravity feed.
- USP <788>; Particulate Matter for Injections (Method 1 Light Obscuration Particle Count Test).
- ISO 23908:2011 Sharps injury protection Requirements and test methods Sharps protection features for single-use hypodermic needles, introducers for catheters and needles used for blood sampling

Biocompatibility

A biocompatibility evaluation, in accordance with 1) ISO 10993-1:2018, Biological Evaluation of Medical Devices Part 1: Evaluation and Testing and 2) FDA guidance Use of International Standard ISO 10993-1, "Biological evaluation of medical devices - Part 1: Evaluation and testing within a risk management process" (issued Sept. 4, 2020), was conducted. The following testing was undertaken to support the biocompatibility of the subject devices:

 ISO 10993-3:2014 Biological evaluation of medical devices Part 3: Tests for genotoxicity, carcinogenicity, and reproductive toxicity

- ISO 10993-4:2017 Biological evaluation of medical devices Part 4: Selection of tests for interactions with blood
- ISO 10993-5:2009 Biological evaluation of medical devices Part 5: Tests for in vitro cytotoxicity
- ISO 10993-6:2016 Biological evaluation of medical devices Part 6: Tests for local effects after implantation
- ISO 10993-10:2010 Biological evaluation of medical devices Part 10: Tests for irritation and skin sensitization
- ISO 10993-11:2017 Biological evaluation of medical devices Part 11: Tests for systemic toxicity
- ISO 10993-12:2012 Biological evaluation of medical devices Part 12: Sample preparation and reference materials

Sterilization and Packaging validation

- ISO 14937:2009 Sterilization of health care products-General requirements for characterization of a sterilizing agent and the development, validation and routine control of a sterilization process for medical device
- AAMI TIR56:2013 Guidance for the development, validation and routine control of an ethylene oxide sterilization process utilizing flexible bag systems for the sterilization of medical devices
- ISO 10993-7:2008 Biological evaluation of medical devices Part 7: Ethylene oxide sterilization residuals
- ASTM F1980-16: Standard Guide for Accelerated Aging of Sterile Barrier Systems for Medical Devices
- ASTM D4332-14: Standard Practice for Conditioning Containers, Packages, or Packaging Components for Testing
- ASTM D4169-16: Standard Practice for Performance Testing of Shipping Containers and Systems
- ASTM F1886-16: Standard Test Method for Determining Integrity of Seals for Flexible Packaging by Visual Inspection
- ASTM F2096-11 (2019): Standard Test Method for Detecting Gross Leaks in Packaging by Internal Pressurization (Bubble Test)
- ASTM F1929-15: Standard Test Method for Detecting Seal Leaks in Porous Medical Packaging by Dye Penetration
- ASTM F88-15: Standard Test Method for Seal Strength of Flexible Barrier Materials

Clinical Testing:

No clinical testing was performed as this device does not require clinical studies to demonstrate substantial equivalence with the predicate device.

Conclusion:

The differences between the subject device and both the primary predicate and secondary predicate devices do not raise new or different questions of safety and effectiveness. The subject device, OSPREY Closed IV Catheter System (OsperyV2) device is substantially equivalent to both the Primary Predicate (A) OSPREY PERIPHERAL IV Catheter System and the Secondary Predicate (B) Nexiva™ Closed IV Catheter System, with respect to indications for use and technological characteristics.